

1 / 14

1 AAAAAGAAAG GAAGAAAATG GAAATACAAC AAACACACCG CAAAATCAAT  
51 CGCCCTCTGG TTTCTCTCGC TTTAGTAGGA GCATTAGTCA GCATCACACC  
101 GCAACAAAGT CATGCCGCCT TTTTCACAAC CGTGATCATT CCAGCCATTG  
151 TTGGGGGTAT CGCTACAGGC ACCGCTGTAG GAACGGTCTC AGGGCTTCTT  
201 AGCTGGGGGC TCAAACAAGC CGAAGAAGCC AATAAAACCC CAGATAAACC  
251 CGATAAAGTT TGGCGCATT C AAGCAGGAAA AGGCTTTAAT GAATTCCCTA  
301 ACAAGGAATA CGACTTATAC AGATCCCTTT TATCCAGTAA GATTGATGGA  
351 GGTGGAATT GGGGGAATGC CGCTAGGCAT TATTGGGTCA AAGGCGGGCA  
401 ACAGAATAAG CTTGAAGTGG ATATGAAAGA CGCTGTAGGG ACTTATACCT  
451 TATCAGGGCT TAGAACTTT ACTGGTGGGG ATTTAGATGT CAATATGCAA  
501 AAAGCCACTT TACGCTTGGG CCAATTCAAT GGCAATTCTT TTACAAGCTA  
551 TAAGGATAGT GCTGATCGCA CCACGAGAGT GATTTCAACG CTAAAAATAT  
601 CTCAATTGAT AATTTGCGAG AAATCAACAA CTCGTGTGGG TTCTGGAGCC  
651 GGGAGGAAAG CCAGCTCTAC GGTTTTGA CT TTGCAAGCTT CAGAAGGGAT  
701 CACTAGCGAT AAAAACGCTG AAATTTCTCT TTATGATGGT GCCACGCTCA  
751 ATTTGGCTTC AAGCAGCGTT AAATTAATGG GTAATGTGTG GATGGGCCGT  
801 TTGCAATACG TGGGAGCGTA TTTGGCCCTC TCATACAGCA CGATAAACAC  
851 TTCAAAGTA ACAGGGGAAG TGAATTTTAA CCACCTCACT GTTGGCGATA  
901 AAAACGCCGC TCAAGCGGGC ATTATCGCTA ATAAAAAGAC TAATATTGGC  
951 AACTGGATT TGTGGCAAAG CGCCGGGTTA AACATTATCG CTCCTCCAGA  
1001 AGGTGGCTAT AAGGATAAAC CCAATAATAC CCTTCTCAA AGTGGTGCTA  
1051 AAAACGACAA AAATGAAAGC GCTAAAAACG ACAAACAAGA GAGCAGTCAA  
1101 AATAATAGTA AACTCAGGT CATTAACCCA CCCAATAGTG CGCAAAAAAC  
1151 AGAAGTTCAA CCCACGCAAG TCATTGATGG GCCTTTTGCG GGCGGCAAAG  
1201 ACACGGTTGT CAATATCAAC CGCATCAACA CTAACGCTGA TGGCAGGATT  
1251 AGAGTGGGAG GGTTTAAAGC TTCTCTTACC ACCAATGCGG CTCATTGCA  
1301 TATCGGCAAA GGCGGTGTCA ATCTGTCCAA TCAAGCGAGC GGGCGCTCTC

FIG. 1A

ERSATZBLATT

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2 / 14

1351 TTATAGTGGA AAATCTAACT GGAATATCA CCGTTGATGG GCCTTT JA  
1401 GTGAATAATC AAGTGGGTGG CTATGCTTTG GCAGGATCAA GCGCGAATTT  
1451 TGAGTTTAAG GCTGGTACGG ATACCAAAAA CGGCACAGCC ACTTTTAATA  
1501 ACGATATTAG TCTGGGAAGA TTTGTGAATT TAAAGGTGGA TGCTCATACA  
1551 GCTAATTTTA AAGGTATTGA TACGGGTAAT GGTGGTTTCA ACACCTTAGA  
1601 TTTTAGTGGC GTTACAGACA AAGTCAATAT CAACAAGCTC ATTACGGCTT  
1651 CCACTAATGT GGCCGTAAA AACTTCAACA TTAATGAATT GATTGTAAA  
1701 ACCAATGGGA TAAGTGTTGG GGAATATACT CATTTTAGCG AAGATATAGG  
1751 CAGTCAATCG CGCATCAATA CCGTGCGTTT GGAAACTGGC ACTAGGTCAC  
1801 TTTTCTCTGG GGGTGTAAA TTAAAGGTG GCGAAAATT GGTATAGAT  
1851 GAGTTTTACT ATAGCCCTTG GAATTATTTT GACGCTAGAA ATATAAAAA  
1901 TGTTGAAATC ACCAATAAAC TTGCTTTTGG ACCTCAAGGA AGTCCTTGGG  
1951 GCACATCAAA ACTTATGTTT AATAATCTAA CCCTAGGTCA AAATGCGGTC  
2001 ATGGATTATA GCCAATTTTT AAATTTAACC ATTCAAGGGG ATTTATCAA  
2051 CAATCAAGGC ACTATCAACT ATCTGGTCCG AGGTGGGAAA GTGGCAACCT  
2101 TAAGCGTAGG CAATGCAGCA GCTATGATGT TTAATAATGA TATAGACAGC  
2151 GCGACCGGAT TTTACAAACC GCTCATCAAG ATTAACAGCG CTCAAGATCT  
2201 CATTAAAAAT ACAGAACATG TTTTATTGAA AGCGAAAATC ATTGGTTATG  
2251 GTAATGTTTC TACAGGTACC AATGGCATTG GTAATGTAA TCTAGAAGAG  
2301 CAATTCAAAG AGCGCCTAGC CCTTTATAAC AACAATAACC GCATGGATAC  
2351 TTGTGTGGTG CGAAATACTG ATGACATTAA AGCATGCGGT ATGGCTATCG  
2401 GCGATCAAAG CATGGTGAAC AACCCTGACA ATTACAAGTA TCTTATCGGT  
2451 AAGGCATGGA AAAATATAGG GATCAGCAAA ACAGCTAATG GCTCTAAAAT  
2501 TTCGGTGTAT TATTTAGGCA ATTCTACGCC TACTGAGAAT GGTGGCAATA  
2551 CCACAAATTT ACCCACAAC ACCACTAGCA ATGCACGTTC TGCCAACAAC  
2601 GCCCTTGCAC AAAACGCTCC TTTCGCTCAA CCTAGTGCTA CTCCTAATTT  
2651 AGTCGCTATC AATCAGCATG ATTTTGGCAC TATTGAAAGC GTGTTTGAAT

FIG. 1B

3 / 14

2701 TGGCTAACCG CTCTAAAGAT ATTGACACGC TTTATGCTAA CTCAGGCGCT  
2751 CAAGGCAGGG ATCTCTTACA AACCTTATTG ATTGATAGCC ATGATGCGGG  
2801 TTATGCCAGA AAAATGATTG ATGCTACAAG CGCTAATGAA ATCACCAAGC  
2851 AATTGAATAC GGCCACTACC ACTTTAAACA ACATAGCCAG TTTAGAGCAT  
2901 AAAACCAGCG GCTTACAAAC TTTGAGCTTG AGTAATGCGA TGATTTTAAA  
2951 TTCTCGTTTA GTCAATCTCT CCAGGAGACA CACCAACCAT ATTGACTCGT  
3001 TCGCCAAACG CTTACAAGCT TTAAGAGACC AAAAATTCGC TTCTTTAGAA  
3051 AGCGCGGCAG AAGTGTTGTA TCAATTTGCC CCTAAATATG AAAACCTAC  
3101 CAATGTTTGG GCTAACGCTA TTGGGGGAAC GAGCTTGAAT AATGGCTCTA  
3151 ACGCTTCATT GTATGGCACA AGCGCGGGCG TAGACGCTTA CCTTAACGGG  
3201 CAAGTGGAAG CCATTGTGGG CGGTTTTGGA AGCTATGGTT ATAGCTCTTT  
3251 TAATAATCGT GCGAACTCCC TTAAGTCTGG GGCCAATAAC ACTAATTTTG  
3301 GCGTGTATAG CCGTATTTTA ACCAACCAGC ATGAATTTGA CTTTGAAGCT  
3351 CAAGGGGCAC TAGGGAGCGA TCAATCAAGC TTGAATTTCA AAAGCGCTCT  
3401 ATTACAAGAT TTGAATCAAA GCTATCATT CTTAGCCTAT AGCGCTGCAA  
3451 CAAGAGCGAG CTATGGTTAT GACTTCGCGT TTTTATAGGAA CGCTTTAGTG  
3501 TTAAGACCAA GCGTGGGTGT GAGCTATAAC CATTTAGGTT CAACCAACTT  
3551 TAAAGCAAC AGCACCAATC AAGTGGCTTT GAAAAATGGC TCTAGCAGTC  
3601 AGCATTTATT CAACGCTAGC GCTAATGTGG AAGCGCGCTA TTATTATGGG  
3651 GACACTTCAT ACTTCTACAT GAATGCTGGA GTTTTACAAG AGTTCGCTCA  
3701 TGTTGGCTCT AATAACGCCG CGTCTTTAAA CACCTTTAAA GTGAATGCCG  
3751 CTCGCAACCC TTAAATACC CATGCCAGAG TGATGATGGG TGGGGAATTA  
3801 AAATTAGCTA AAGAAGTGTT TTTGAATTTG GCGTGTGTTT ATTTGCACAA  
3851 TTTGATTTCC AATATAGGCC ATTCGCTTC CAATTTAGGA ATGAGGTATA  
3901 GTTTCTAAAT ACCGCTCTTA AACCCATGCT CAAAGCATGG GTTTGAAATC  
3951 TTACAAAACA

FIG. 1C

ERSAT7RI ATT

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4 / 14

1 MEIQQTHRKI NRPLVSLALV GALVSITPQQ SHAAFFTTVI IPAIVGGIAT  
51 GTAVGTVSGL LSWGLKQAE E ANKTPDKPDK VWRIQAGKGF NEFPNKEYDL  
101 YRSLLSSKID GGWDWGNAAR HYWVKGGQQN KLEVDMKDAV GTYTLISGLRN  
151 FTGGDLVDNM QKATLRLGQF NGNSFTSYKD SADRTTRVIS TLKISQLIIL  
201 QKSTTRVSGS AGRKASSTVL TLQASEGITS DKNAEISLYD GATLNLASSS  
251 VKLMGNVWVG RLQYVGAYLA PSYSTINTSK VTGEVNFNHL TVGDKNAAQA  
301 GIIANKKTNI GTLDLWQSAG LNIIAPPEGG YKDKPNNTPS QSGAKNDKNE  
351 SAKNDKQESS QNNSNTQVIN PPNSAQKTEV OPTQVIDGPF AGGKDTVVNI  
401 NRINTNADGT IRVGGFKASL TTNAHLHIG KGGVNLSNQA SGRSLIVENL  
451 TGNITVDGPL RVNNQVGGYA LAGSSANFEF KAGTDTKNGT ATFNNDISLG  
501 RFVNLKVDAH TANFKGIDTG NGGFNTLDFS GVTDKVNINK LITASTNVAV  
551 KNFNINELIV KTNGISVGEY THFSEDIGSQ SRINTVRLET GTRSLFSGGV  
601 KFKGGKELVI DEFYYSPWNY FDARNIKNVE ITNKLAFGPQ GSPWGTSKLM  
651 FNNLTLGQNA VMDYSQFLNL TIQGDFFINQ GTINYLVRRG KVALTSVGNA  
701 AAMMFNNDID SATGFYKPLI KINSAQDLIK NTEHVLLKAK IIGYGNVSTG  
751 TNGISNVNLE EQFKERLALY NNNNRMDTCV VRNTDDIKAC GMAIGDQSMV  
801 NNPDPNYKYLI GKAWKNIGIS KTANGSKISV YYLGNSTPTE NGGNTTNLPT  
851 NTTSNARSAN NALAQNAFPA QPSATPNLVA INQHDFGTIE SVFELANRSK  
901 DIDTLYANSQ AQGRDLLQTL LIDSHDAGYA RKMIDATSAN EITKQLNTAT  
951 TTLNNIASLE HKTSGLQTLS LSNAMILNSR LVNLSRRHTN HIDSFAKRLQ  
1001 ALKDQKFASL ESAAEVLYQF APKYEKPTNV WANAIGGTSL NNGSNASLYG  
1051 TSAGVDAYLN GQVEAIVGGF GSYGYSSFNN RANSLNSGAN NTNFGVYSRI  
1101 LTNQHEFDFF AQGALGSDQS SLNFKSALLQ DLNQSYHYLA YSAATRASYG  
1151 YDFAFFRNAL VLKPSVGVSY NHLGSTNFKS NSTNQVALKN GSSSQHLFNA  
1201 SANVEARYYY GDTSYFYMNA GVLQEFHVG SNNAASLNTF KVNAARNPLN  
1251 THARVMMGGE LKLAKEVFLN LGVVYLHNLI SNIGHFASNL GMRYSF

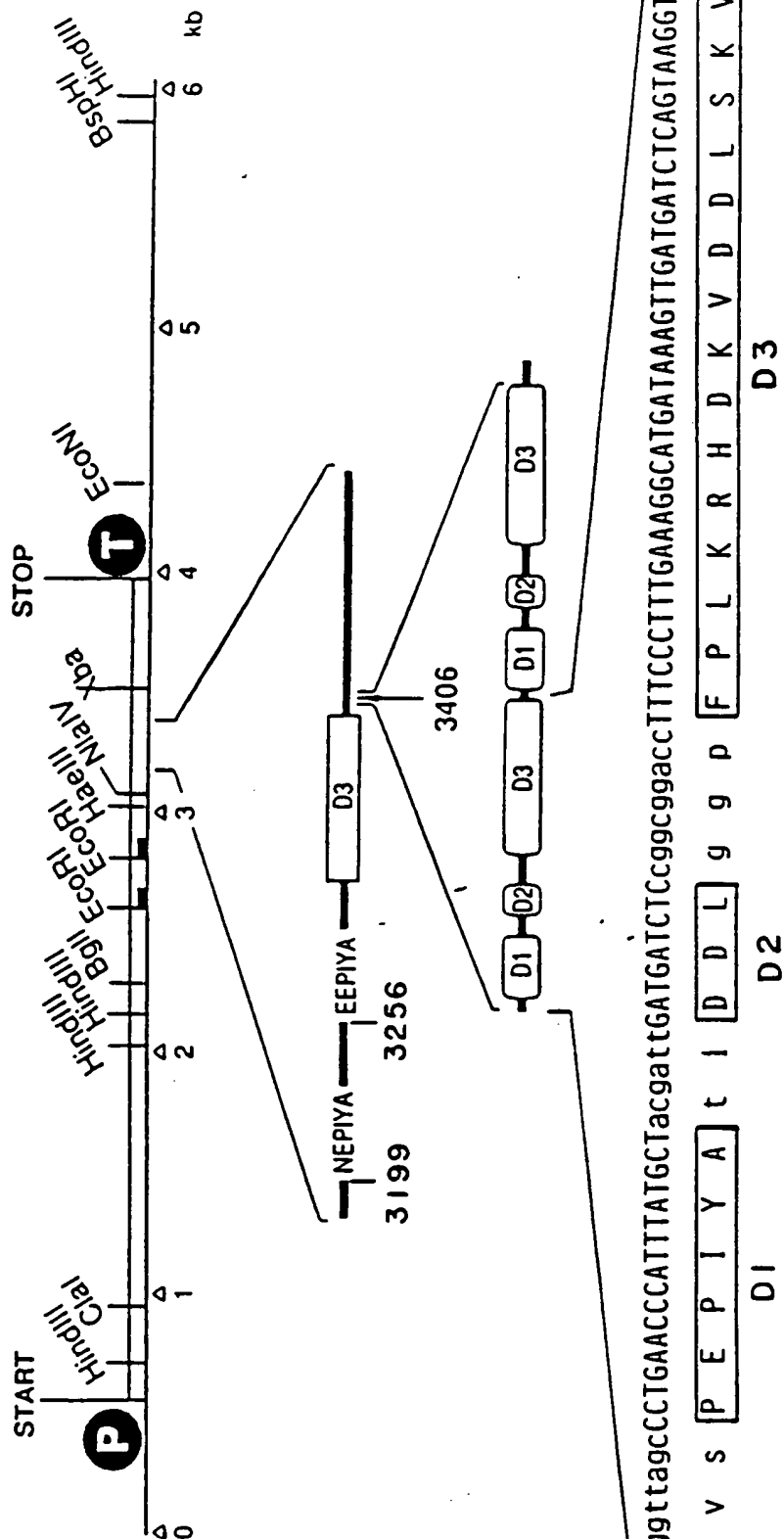
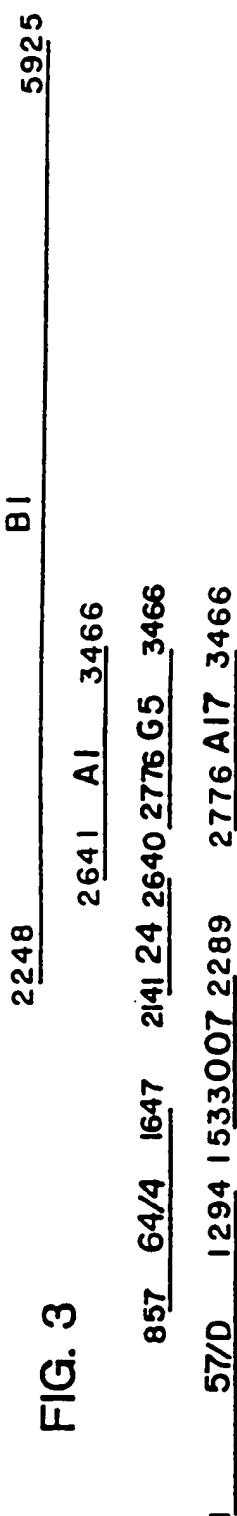
FIG. 2

ERSATZBLATT

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[illegible]

Fig. 3



**ERSATZBLATT**

CTCCATTTTAAGCACTCCATAGACCCTAAGAACTTTTTTTGAGGCTATCTTGAA  
GCTTAATTATACATGCTAGTAGAAGCATGACACACAACCAAACTATTTTAGACGCTT  
TCAAAAGATTCTATTCCTGTTCTTATTAAAGTCTTTCATTTAGCAAAATTT  
CTTTTTCATATTAAATGATTAAATGAAGAAAAAATGCTTGATTTGTTGAT  
TTGACACTAACCAAGATACCGATAGGATGAACTAGGTATAGTAGAGAAACAATGACT  
M T  
AATAATCTCAAGTAGCTTTCTTAAAGTTGATAACGCTGTCGCTTCATACGATCCTGAT  
23 M N L Q V A F L K V D N A V A S Y D P D  
CAATTAAGGGAAGATCTCCAATAAGCGATCAAAATCTTACCACAAAGAAATCAGTAT  
63 Q L R E E Y S N K A I K N P T K K N Q Y  
GAATCTCCACAAGAGCTTTTCAGAAATTTGGGATCAGCGTTACCGAATTTTCACAAGT  
103 E S S T K S F Q K F G D Q R Y R I F T S  
GAAATATCATACAAACCCCTATCCTTGATGATAAGAGAAGCGGAGTTTGAATCT  
143 E N I I Q P I L D D K E K A E F L K S  
ATGGCGTGTGATGAGTCTTGAAAGAAAGGCAAGAGCAAGAAATGGAGAGCTT  
183 M G V F D E S L K E R Q E A E K M G E P  
GATGCAAGAAGCAATCAATCAAGAACCGATCCCATGTGCCAACCCAGATATAGCCACT  
223 D V K E A I N Q E P V P H V Q P D I A T  
AATTTTCTAAATTCACICTTGGCGATATGGAAATGTTAGATGTTGAGGAGTCGCTGAC  
263 M F S K F T L G D M E M L D V E G V A D  
TTAATGGGAGTCAATATGGCATAGAACTGAAAGTTTCATTGTTGATGAGGAGCAAT  
303 L M G S H N G I E P E K V S L L Y G G M  
AACATGTTGCTACATAATTAATGTGCATATGAAACCGGAGTGGCTTAGTCATAGCA  
343 M N V A T I I I N V H M K N G S G L V I A  
GGCTCACACGAGGATTAAGTCAAGAAGAGATCCAAACAAATAGATTTTCATGGAATTT  
383 G S Q R A L S Q E E I O N K I D F M E F  
ACTGAGATTAAGATTTCCAAAGACTCTAAGCTTATTAGACGCGCTTAGGAAATGAT  
423 T E I K D F Q K D S K A Y L D A L G N D  
AATGGGATTTGAGCTACACTCTCAAGATTATGGGAAAGAGAGATTAAGCTTTAGAT  
463 N G D L S Y T L K D Y G K K A D K A L D  
TATTCATTTCAATACACCAACGCTCCCAAGATCCCAATAGGTTGATGAGGCTTACG

FIG. 4A

ERSATZBLATT

ATCTGCTATTGATTTGTTTCCATTTTGTTCCTATGAGTCTTGTGGATCACAAC 120  
CATGTGCTCACCTTGACTAACCATTTCTCAACCATACCTTTAGCTTGATTTGATTTCT 240  
TTGTTAATTGTTGTTAAATGTTGATCGCTTAGCTTTAGACGCTGCAACGATCGG 360  
AATGAGAAATGTTCAAGACATGATTTGACTACTCAAGCGTGTAGCGATTTTTCAGCTCT 480  
AACGAAACCATTTGACCAACCAACCAACCGGCTTTTAAACCCGCAACATTTATC 600  
N E T I D Q Q P Q T E A A F M P Q Q F I  
CAAAACCAATCGTTGATAAGAACGATAGGATAACAGGCAAGCTTTTGAAGGAATCTCG 720  
Q K P I V D K N D R D M R Q A F E G I S  
TTTTCAGACTTTTCAATAAGAGCAATGATTTAATCAACAAGACAAATCTCATTTGATGA 840  
F S D F I N K S N D L I M K D M L I D V  
TGGGTGCTCCCATCAAAACGATCCGCTAAATCAACACCCGATCGATCCGAAATTTTATG 960  
W V S H Q N D P S K I M T R S I R M F M  
GCCAAACAAATCTTTGAGGAAATCATATAGGGAATCAATCCGAAACGATCAAAAGTTT 1080  
A K Q S F A G I I I G M Q I R T D Q K F  
ACTGGTGGGATTTGTTGATATTTTCTCTCATTTATTTGACAAACAAATCTTCT 1200  
T G G D W L D I F L S F I F D K K Q S S  
ACCACCCGACATACAGGCTTACCCTGAGCTAGAGATTTACTTGTGAAAGGGT 1320  
T T T D I O G L P P E A R D L L D E R G  
ATTGATCCCAATTACATGTTCAATCAATTTATGATTCACAAATACGCTCTGCTCTGTG 1440  
I D P M Y K F M Q L L I H M N A L S V  
GGTGGTCTGGAAGTACGATGTTGGAACGCCAGCTTGTGTTAAGAACCAACAGGC 1560  
G G P G A R H D W M A T V G Y K D Q Q G  
GGTGGTGAAGAGGATTAACAAACCTAGTTTTTATCTCTACAAAGAACCAACTCACA 1680  
G G E K G I M N P S F Y L Y K E D Q L T  
CTTGCAAAATTAATGCTAAATTAGAACCTTGAAGGAGAGAGAGAGAGAGAGAGAGAGAG 1800  
L A Q M N A K L D N L S E K E K E K F R  
CGTATGCTTTTGTCTTAAAGAACCAACAAATTTACGCTTTTAACTGAGTTGTT 1920  
R I A F V S K K D T K H S A L I T E F G  
AGGAGAGAAATGTTACTCTTCAAGGAGCTTAAACATGATGGCGTGTGTTGTTGAT 2040  
R E K M V T L Q G S L K H D G V M F V D  
AATGGCGTTTCCCATTTAGAGTAGGCTTTTAAACAGGTAGCTATCTTAAATTTGCTGAT 2160

FIG. 4B

ERSATZBLATT

503 Y S N F K Y T N A S K N P N K G V G V T  
TTAATAATCTCGCTATCACTAGTTTCGTAAGCGGAATTAGAGGATAAATAACCACT  
543 L N M L A I T S F V R R N L E D K L T T  
GAATTGGTGGAAAACTTTAACTTCAATAAGCTGAGTGCCTAAACACACAGGC  
583 E L V G K T L N F N K A V A D A K N T G  
CATTAGAGAAAGTAGAGAAAATTTGGAGAGCAAAAGCGGCAACAAAATAAATG  
623 H L E K E V E K L E S K S G N K N K M  
GCTAATAGAGCGCAAGCAATCGCTACGCTCAGAATCTTAAGGCATCAAAAGGAA  
663 A N R D A R A I A Y A Q N L K G I K R E  
GAATCAAAATGGCAAAATAAGGATTCAGCAAGGAGCAAGCAAACTAAAGCCCTT  
703 E F K N G K N K D F S K A E E T L K A L  
AATGCAGCTTTGNAATTCAAAATGGCAAAATAAGGATTCAGCAAGGTAACGCA  
743 N A A L N E F K N G K N K D F S K V T Q  
AAGTTGATAATCTCAATCAAGCGGTATCAGTGGCTAAGCAACGGGTGATTCAGTAGG  
783 K V D N L N O A V S V A K A T G D F S R  
CAAAAAATGAAGTCTCAATGCTAGAAAAATCTGABATATATCAATCCGTTAAGAT  
823 Q K N E S L N A R K K S E I Y O S V K N  
AAAACTTTTCGGACATCAAGAAAGAGTTGAATGCAAAATCTGGAAATTCATAACAT  
863 K N F S D I K K E L N A K L G N F N N N  
CAAGCAGTAGCTTGAAGAACCCATTACGCTCAAGTTGCTAAGAAAGTAATGCARAA  
903 Q A A S L E E P I Y A O V A K K V N A K  
CCTTTGAAAGGCGCATGAATGATCTCAGTAAGGTAGGCTTCAAGGAATCAA  
943 P L K R H D K V D D L S K V G L S R N O  
TTTGGCAATCTAGAGCAACGATAGACAGCTCAAGATTCTACAAAACACATCCCATG  
983 F G N L E O T I D K L K D S T K H N P M  
TACGCTACTAACAGCCACATACGCTAATAGCAATATCAAAATGGAGCAATCAATGAA

FIG.4C

ERSATZBLATT

N G V S H L E V G F M K V A I F M L P D  
AAAGGATTGCCCCACAAGAGCTAATAGCTTATCAAGATTTTTTGAGCAGCAACAA 2280  
K G L S P O E A N K L I K D F L S S M K  
AATTATGATGAAGTGAAGAAAGCTCAGAAGATCTTGAAAATCTCTAAGGAACAGAG 2400  
N Y D E V K K A Q K D L E K S L R K R E  
GAAGCAAAAGCTCAAGCTAACAGCAACCAAAAGATGAGATTTTGCTGATCAATAAGAG 2520  
E A K A Q A N S O K D E I F A L I N K E  
TTGCTGATAAATCTGAAAATGTCAACAAGATTTGAAGACTTTGATAAATCTTTTGAT 2640  
L S D K L E N V N K N L K D F D K S F D  
AAAGTTGCTGGAAGATTTAGGTATCAATCCAGATGGATTTCAAAAGTTGAAAACCTT 2760  
K G S V K D L G I N P E W I S K V E N L  
GCAAAAGCGACCTTGAAAATTCCTTAAGATGTGATCATCAATCAAAAGGTAACGGAT 2880  
A K S D L E N S V K K D V I I N O K V T D  
GTAGAGCAAGCTTAGCGCATCTCAAAAATTTCTCAAGGAGCAATTTGGCCCAACAGCT 3000  
V E O A L A D L K N F S K E Q L A Q O A  
GGTGTGAATGGAAACCTTAGTCGGTAATGGGTTATCTCAAGCAGAGGCCACAACTTTCT 3120  
G V N G T L V G M G L S O A E A T T L S  
AACAAATAGGACTCAAAACCAACCCATTTATGCTAAAGTTAATAAAGAAAGACAGG 3240  
N M N G L K N E P I Y A K V N K K A G  
ATTGACCGACTCAATCAATAATAGCAAGTGGTTTG66TGTGAGGCAAGCAGCGGCTTC 3360  
I D R L N Q I A S G L G V V G O A A G F  
GAATTGGCTCAGAAAATTTGACAAATCTCAATCAAGCGGTATCAGAACTAAAGCAGGTTT 3480  
E L A Q K I D N L N O A V S E A K A G F  
AATCTATG66TTGAAAGTGCAAAAGAAAGTACCTGCTAGTTGTGAGGAAACTAGACAAT 3600  
N L W V E S A K K V P A S L S A K L D M  
AAAGCGACCGGCATGCTAACGCCAAAACCCCTGAGTGGCTCAAGCTCGTGAATGATAG 3720

FIG.4D

ERSATZBLATT

1023 Y A T N S H I R I N S N I K N G A I N  
 ATAGTTGCGCATAATGTAGGAAGCGTTCCCTTTGTCAGAGTATGATAAATTTGGCTTC  
 1063 I V A H N V G S V P L S E Y D K I G F  
 GTAAAGACACACTAATCTG6CCTTACGCAATTTTAAACCAATGCAATTTCTACAGCA  
 1103 V K D T N S G F T Q F L T N A F S T A  
 GGTTTCCAAAATCTTAAAGGATTAAAGGATTACCAAAACGCAAAACCCACCCCTTG  
 1143 G F Q K S  
 TGAATGCTACCAATTCATGGTATCATATCCCATACATTCGTATCTAGCGTAGGAAG  
 AACTCTGTAAATCCCTATTATAGGACACAGAGTGAGAACCAACTCTCCCTACGG  
 GACAGACACTAACGAAGGCTTTGTCTTTAAAGTCTGCAATGGATATTTCTACCCC  
 CGAAATTAATTAAGGTTTAAAGAGAGCATAACTAGAAAACCAAGTAGCTATA  
 GAAATCAGAAAACCATAGGAATTATCACACCTTATAATGCCCAAAAGACGCT  
 ATGCCTTCAAGGTGAAGAGGCAGATATTATTATTCACCGTGAAACTTGTG  
 ATCTCATTTTGTGGTAAAGCTTTCTTTGAGAAATTTATGAGCGCTTATAATCAACAC  
 CATTCTCGCTTCAAAAGCTTTTCAATAATCTCTAAAGCGCTTATAATCAACAC  
 TTATTAGCGTTACAAATTTGAGCCATCTTTAGCTTGTCTTTCTAGCCAGATCACATC  
 CTGCAATATCTACAAATAGCATCGCCCGAATGGATGAGTGGG666GTTTGAAG  
 TAAATAATCACTTCGGGAAAATCTTTAAGGGAGTGAAATAATAACGCATGCAAGTT  
 TGCGAACATTTCAAAATAGCCTTGTGTTTCAGGGCATTGTGATAGCGTTGGATTGG  
 GCTAAATGCTTGGCTCAATCACGCCCAACAATAGGGATTTTGGAAATGCTTTTGCATC  
 TTGAAAAATCCAAAGCCTCTAAGCCAAATTTGCTTGTGATCGTAGTGG66GCTTTTAGTG  
 AG6CTTTTAAACGCTTAAACCTCCCAACCGCTATCAAAACGCTATTTTCATG  
 TCTCATTTGCTCTAGTTGTTGCTATTTAGATAGACAAAGCTT 5925

FIG. 4E

ERSATZBLATT

E K A T G M L T Q K N P E W L K L V M D K  
 AACCAAGAATATGAAGATTATCTGATTGCTTCAAGTTTCCACCAGTTGAACATGCT 3840  
 M O K N M K D Y S D S F K F S T K L N M  
 TCTTATTACTGCTTGGCGAGAGAAATCGGAGCATGGAAATCAAGAACGTTAATACAAAC 3960  
 S Y Y C L A R E N A E H G I K N V M T K G  
 CTAAAGCGAGG66GTTTAAATACTCTTAGCAGAAATCCCAATCGTCTTTAGTATTTGGGA 4080  
 TGTGCAAAAGTTACGCTTTGGAGATATGATGTGTAGACCTGTAGGGAATGCTTGGAGCTCA 4200  
 GCAACATCAGCCTAGGAAGCCCAATCGTCTTTAGCGGTGGGCACTTCACCTTAAAAATATCCC 4320  
 AAAAGACTTAACCTTTGCTTAAATTAAGTTTGAATGCTAGTGGGTTCTGCTATAGTG 4440  
 ACAAGATCAAGTTCAAAAATCATAGAGCTTTTAGAGCAAAATGATCGGCTCTTAACCAAA 4560  
 TGGATCAGAAGTGGAATAATACGGCTTCAAGAAATTTGATGAGCTCAAAATAGACACTGTGG 4680  
 GTAACTTTCTTCTTCTGCTAGATTCTAAACGCTTGAATGTGGCTATTTCTAGGGCAAAAGAA 4800  
 ATATCTTTAGCGCTATTTTGAAGCTGTAGATAGGTAATCTTTTCCAAAGATAATCATAGA 4920  
 AATACCTTTATAGTGTAGCTATAGCCCLTTTGTGGAAATGAGTATTTTGTGACTTTAAATTT 5040  
 GCCGCTCGCATGAATTCACCTTTAGGGAATGCGTGTGCAATTTTAAAGGGGCTATTTTG 5160  
 GGCAAAATGCTCCATAAAATAGCCCTCAATTTTGAAGCGATTAAAGGAAATGCGTGAACC 5280  
 TCTAAACAATTCGCCCTCTAAATACTTTCTCAATCAAGGCAAAAAGAGAAGTGGCTAAA 5400  
 ATGCTGCTTTTGTGCTAGCCTTAAATAGG66GCTTTTATCTTTTACTTGTGCTTGATC 5520  
 TCTTCTAAAGCTAGAGCGCTGCTGTGTGATG6CCACAAATCAATTAATCAATCTG6TGGGT 5640  
 CCATAAGGCACTCTAGCGGCTATG6CCATAATAGATGATTTTCATCAAAATATGCGCTTTTAA 5760  
 ACACCTTTTAAATTAATG6GATTAATTAAGGATTTTATTTTTCATTCATTAAGTTTAAAT 5880

FIG. 4F

ERSATZBLATT



12 / 14

10 30 50  
AAGCTTGCTGTCATGATCACAAAAACACTAAAAACATTATTATTAAGGATACAAAATG  
M  
70 90 110  
GCAAAAGAAATCAAATTTTCAGATAGTGCGAGAAACCTTTTATTTGAAGGCGTGAGGCAA  
A K E I K F S D S A R N L L F E G V R Q  
130 150 170  
CTCCATGACGCTGTCAAAGTAACCATGGGGCCAAGAGGCAGGAATGTATTGATCCAAAA  
L H D A V K V T M G P R G R N V L I Q K  
190 210 230  
AGCTATGGCGCTCCAAGCATCACCAAAGACGGCGTGAGCGTGGCTAAAGAGATTGAATTA  
S Y G A P S I T K D G V S V A K E I E L  
250 270 290  
AGTTGCCCAGTAGCTAACATGGGCGCTCAACTCGTTAAAGAAGTAGCGAGCAAAACCGCT  
S C P V A N M G A Q L V K E V A S K T A  
310 330 350  
GATGCTGCCGGCGATGGCACGACCACAGCGACCGTGCTAGCTTATAGCATTTTTAAAGAA  
D A A G D G T T T A T V L A Y S I F K E  
370 390 410  
GGTTTGAGGAATATCACGGCTGGGGCTAACCCCTATTGAAGTGAAACGAGGCATGGATAAA  
G L R N I T A G A N P I E V K R G M D K  
430 450 470  
GCTGCTGAAGCGATCATTAAATGAGCTTAAAAAAGCGAGCAAAAAAGTAGGCGGTAAAGAA  
A A E A I I N E L K K A S K K V G G K E  
490 510 530  
GAAATCACCCAAGTGGCGACCATTTCTGCAAACTCCGATCACAATATCGGGAAACTCATC  
E I T Q V A T I S A N S D H N I G K L I  
550 570 590  
GCTGACGCTATGGAAAAAGTGGGTAAAGACGGCGTGATCACCGTTGAGGAAGCTAAGGGC  
A D A M E K V G K D G V I T V E E A K G  
610 630 650  
ATTGAAGATGAATTGGATGTCGTAGAAGGCATGCAATTTGATAGAGGCTACCTCTCCCCT  
I E D E L D V V E G M Q F D R G Y L S P

FIG. 5A

13 / 14

670 690 710  
 TATTTTGTAACGAACGCTGAGAAAATGACCGCTCAATTGGATAATGCTTACATCCTTTTA  
 Y F V T N A E K M T A Q L D N A Y I L L  
 730 750 770  
 ACGGATAAAAAAATCTCTAGCATGAAAGACATTCTCCCGCTACTAGAAAAAACCATGAAA  
 T D K K I S S M K D I L P L L E K T M K  
 790 810 HindIII  
 GAGGGCAAACCGCTTTTAATCATCGCTGAAGACATTGAGGGCGAAGCTTTAACGACTCTA  
 E G K P L L I I A E D I E G E A L T T L  
 850 870 890  
 GTGGTGAATAAATTAAGAGGCGTGTTGAATATCGCAGCGGTTAAAGCTCCAGGCTTTGGG  
 V V N K L R G V L N I A A V K A P G F G  
 910 930 950  
 GACAGAAGAAAAGAAATGCTCAAAGACATCGCTATTTTAACCGGCGGTCAAGTCATTAGC  
 D R R K E M L K D I A I L T G G Q V I S  
 970 990 1010  
 GAAGAATTGGGCTTGAGTCTAGAAAACGCTGAAGTGGAGTTTTTAGGCAAAGCTGGAAGG  
 E E L G L S L E N A E V E F L G K A G R  
 1030 1050 1070  
 ATTGTGATTGACAAAGACAACACCACGATCGTAGATGGCAAAGGCCATAGCGATGATGT  
 I V I D K D N T T I V D G K G H S D D V  
 1090 1110 1130  
 AAAGACAGAGTCGCGCAGATCAAAACCCAAATTGCAAGTACGACAAGCGATTATGACAAA  
 K D R V A Q I K T Q I A S T T S D Y D K  
 1150 1170 1190  
 GAAAAATTGCAAGAAAGATTGGCTAAACTCTCTGGCGGTGTGGCTGTGATTAAAGTGGGC  
 E K L Q E R L A K L S G G V A V I K V G  
 1210 1230 1250  
 GCTGCGAGTGAAGTGGAAATGAAAGAGAAAAAAGACCGGGTGGATGACGCGTTGAGCGCG  
 A A S E V E M K E K K D R V D D A L S A  
 1270 1290 1310  
 ACTAAAGCGGCGGTTGAAGAAGGCATTGTGATTGGTGGCGGTGCGGCTCTCATTCGCGCG  
 T K A A V E E G I V I G G G A A L I R A

FIG. 5B

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14 / 14

1330 1350 1370  
GCTCAAAAAGTGCATTTGAATTTGCACGATGATGAAAAAGTGGGCTATGAAATCATCATG  
A Q K V H L N L H D D E K V G Y E I I M  
1390 1410 1430  
CGCGCCATTAAAGCCCCATTAGCTCAAATCGCTATCAACGCTGGTTATGATGGCGGTGTG  
R A I K A P L A Q I A I N A G Y D G G V  
1450 1470 1490  
GTCGTGAATGAAGTAGAAAAACACGAAGGGCATTTTGGTTTTAACGCTAGCAATGGCAAG  
V V N E V E K H E G H F G F N A S N G K  
1510 1530 1550  
TATGTGGATATGTTTAAAGAAGGCATTATTGACCCCTTAAAAGTAGAAAGGATCGCTCTA  
Y V D M F K E G I I D P L K V E R I A L  
1570 1590 1610  
CAAAATGCGGTTTCGGTTTCAAGCCTGCTTTTAACCACAGAAGCCACCGTGCATGAAATC  
Q N A V S V S S L L L T T E A T V H E I  
1630 1650 1670  
AAAGAAGAAAAAGCGACTCCGGCAATGCCTGATATGGGTGGCATGGGCGGTATGGGAGGC  
K E E K A T P A M P D M G G M G G M G G  
1690 1710 1730  
ATGGGCGGCATGATGTAAGCCCGCTTGCTTTTAGTATAATCTGCTTTTAAATCCCTTC  
M G G M M \*  
1750 1770 1790  
TCTAAATCCCCCCTTTCTAAATCTCTTTTTGGGGGGGTGCTTTGATAAAACCGCTCG  
  
1810 1830  
CTTGTA AAAACATGCAACAAAAAATCTCTGTTAAGCTT

FIG. 5C